NATIONAL RAILROAD MUSEUM

A CAVALCADE OF AMERICAN RAILROAD HISTORY

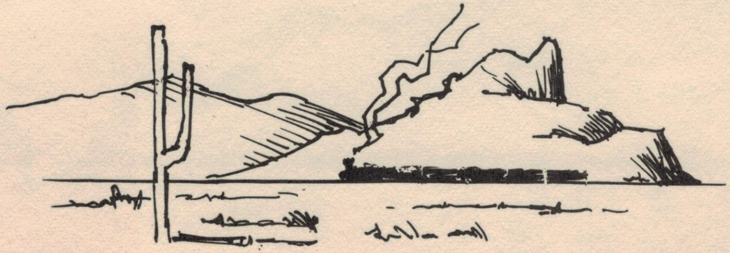
W. D. COOKE PARK
SOUTH BROADWAY

GREEN BAY, WISCONSIN

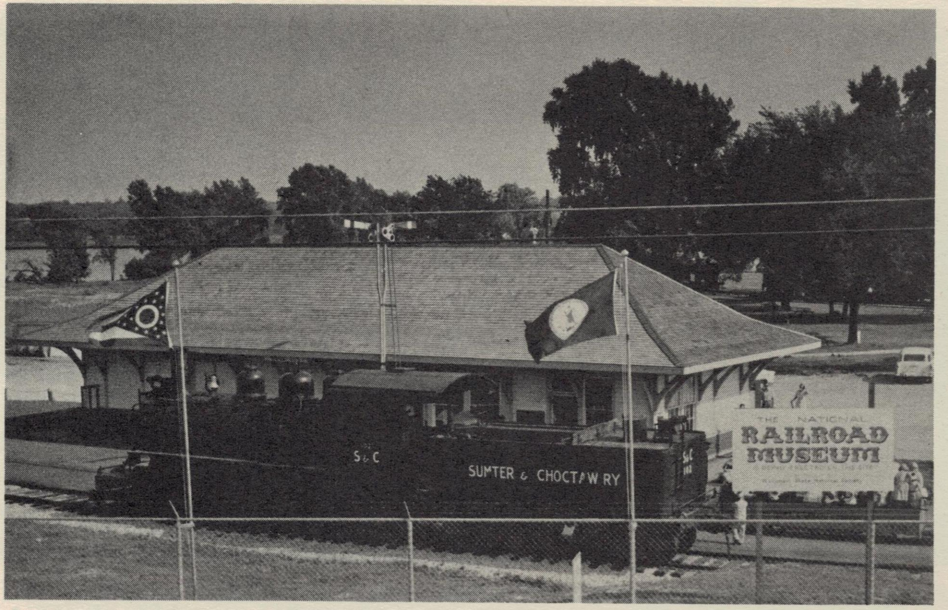
This nation has many shining hours . . . . periods in which the people of a democratic nation demonstrated an almost unbelievable vigor in rising to triumph over new horizons, to create new visions of accomplishment, or to become, individually or in concert, the strength to turn back that which threatened the new found security and freedom. The American epic is bright with many shining hours. Among the brightest is that great period of growth called the "Age of Steam". It was this period that saw this country rise from a struggling agrarian infant nation into a powerful and respected world power.

It is to the great motivator of the "Age of Steam" that the National Railroad Museum is dedicated. It was the searching siren of a steam driven locomotive that heralded the arrival of progress in thousands of communities throughout this growing land. In memory of this great American period and in an effort to preserve the heritage of a great democracy, the non-profit National Railroad Museum was formed.

The history of steam railroading is long and complex and many books are available on the subject. Here at the National Railroad Museum is the living epic on display as the steam engines and cars, each with its own long and illustrious history rests amongst its fellows contemplating, if this were possible, the moments when the great experiment of free enterprise was proved to be a fact – and these monuments were the tools by which the experiment functioned and thrived.



The National Railroad Museum at Green Bay, Wisconsin. This booklet will describe many of the locomotives and cars presently on display at the National Railroad Museum.


S & C
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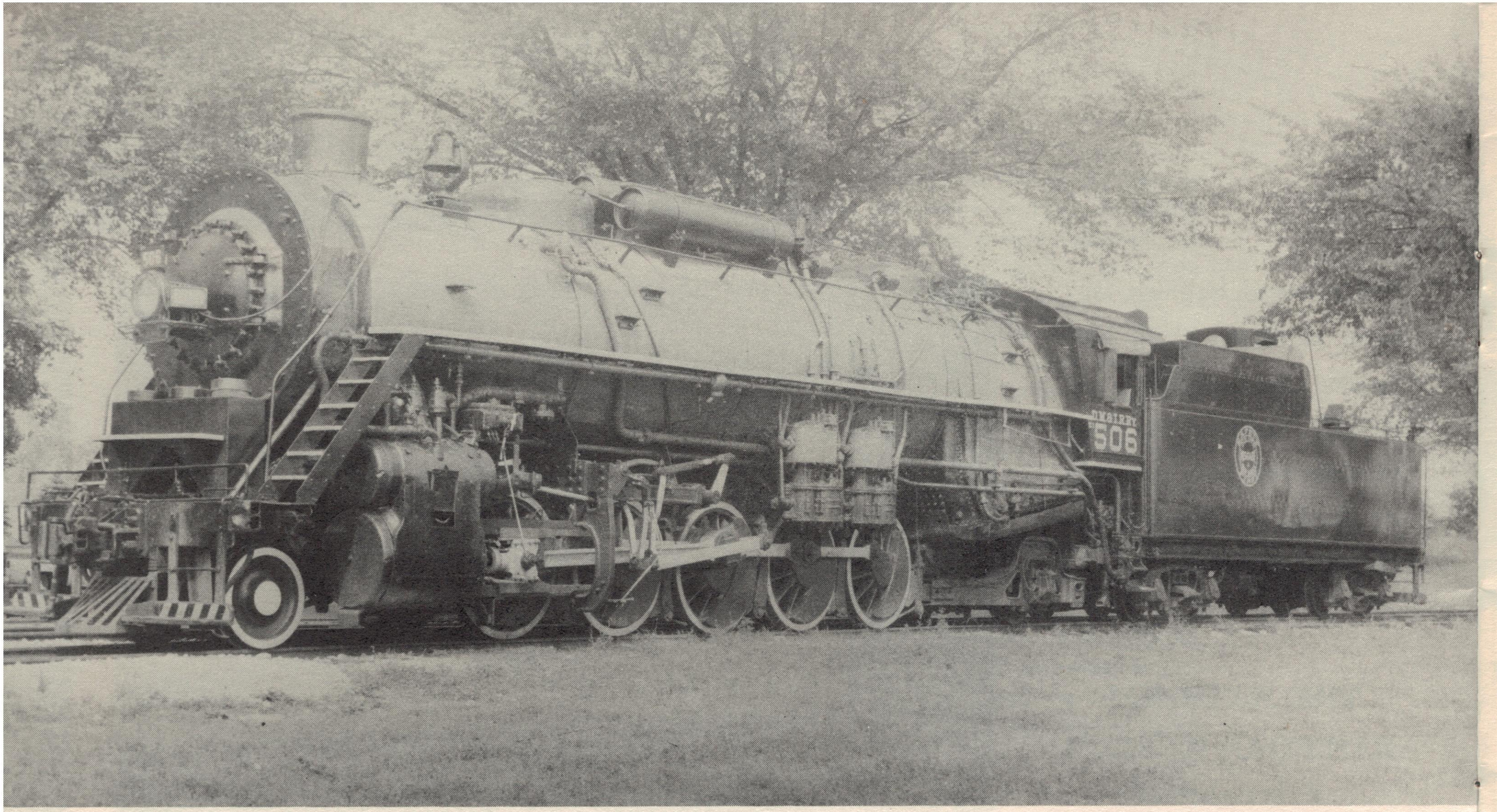
THE NATIONAL
RAILROAD
MUSEUM

THE NATIONAL RAILROAD MUSEUM

W. D. Cooke Park
Green Bay, Wisconsin



DULUTH, MISSABE & IRON RANGE RAILWAY 2-10-2

This engine was built at the Brooks Works of the American Locomotive Company in 1919. One of ten built to the specifications of the United States Railways Administration. Used on main line service hauling as many as 150 car iron ore trains until 1942 over the famous iron range from Proctor, Virginia to Ely, Minnesota.

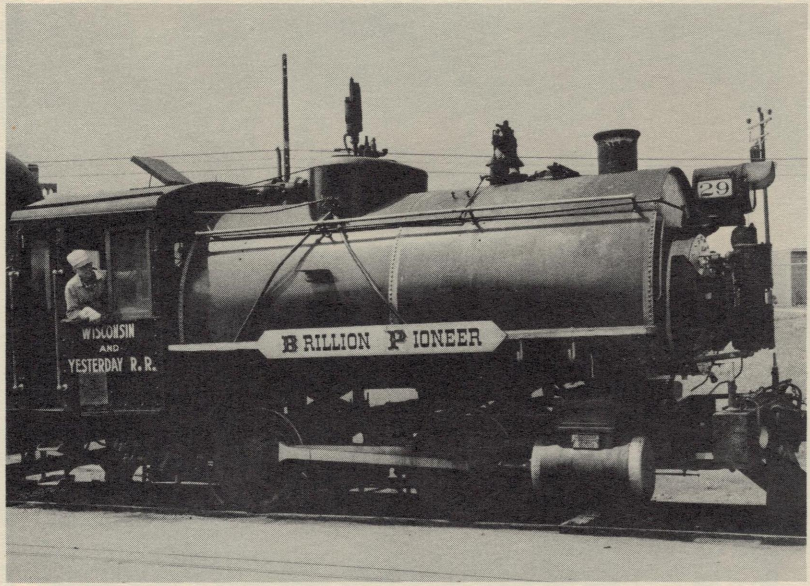
DM&IR No. 506 – Brooks Locomotive Works 1919 Class EL

This engine built to the specifications of the U. S. Railway administration. As built they were as follows:

Fuel	Coal
Steam pressure	200 lbs.
Cylinders	27 x 32
Drivers, in.	57
Tractive effort. lbs.	69,600
Valve type	Piston
Valve gear	Southern
Wheel base, Driving	21 ft.
Wheel base, Engine	40 ft. 4 in.
Boiler outside diameter	86 - 96 ins.
Firebox ring	115 x 97 ins.
Tubes, number and size	45 - 5½ ins. 247 - 2¼ ins.
Tubes, length	20 ft. 6 ins.
Combustion Chamber, length	60 ins.
Firebox heating surface	329 sq. ft.
Evaporative heating surface	4,656 sq. ft.
Grate area	76.3 sq. ft.
Weight on drivers	276,000 lbs.
Weight of engine	352,000 lbs.

The engine as now shown must be somewhat heavier than the figures given as there have been modifications through the years. An additional air compressor has been added and a Type B Stoker has been added. The Cole type trailing truck has been replaced by a Commonwealth Delta truck which is heavier. The feed water heater has been removed.

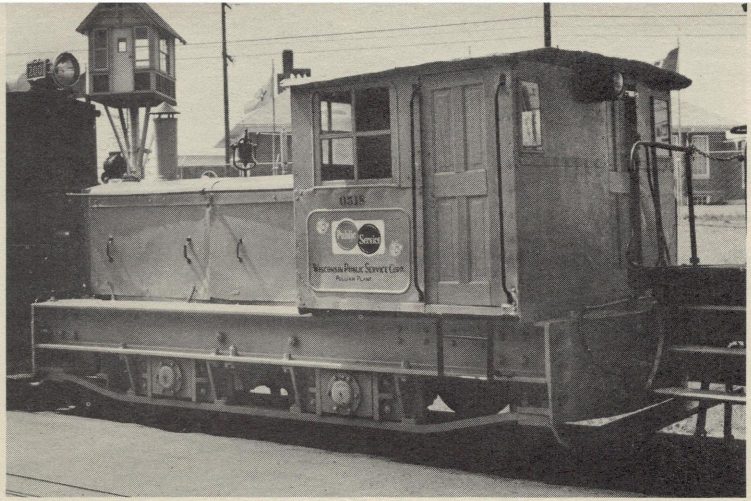
THE BRILLION PIONEER



0-4-0 Type No. 29

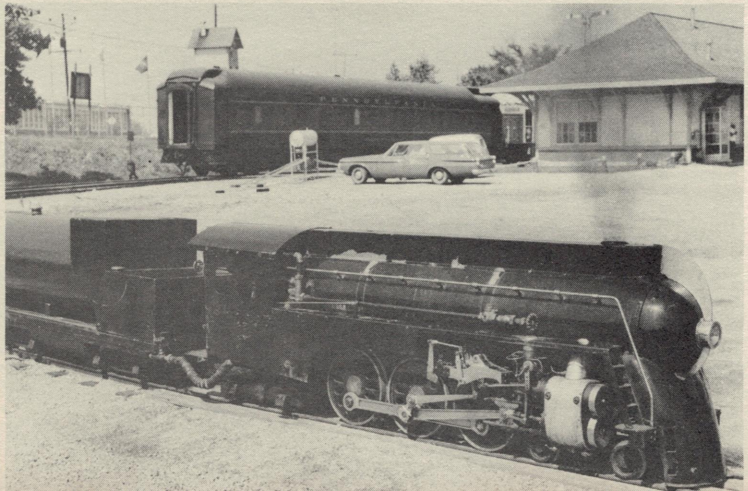
Wisconsin and Yesterday Railroad

This small engine spent many years as a switch engine in the Chicago yards hauling millions of tons of freight. Holding one ton of coal the engine is known as the saddle type.

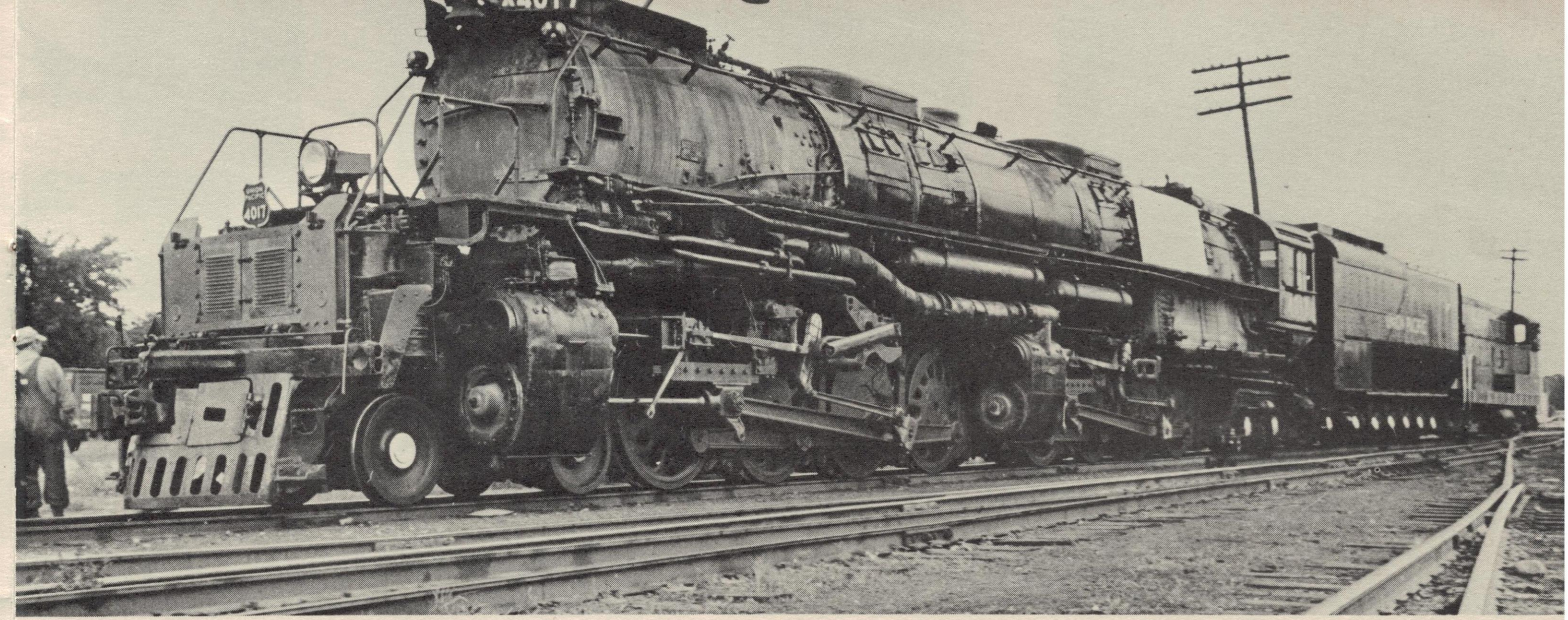


PUBLIC SERVICE DIESEL SWITCHER

THE TWENTIETH CENTURY LIMITED Henry C. Hyslop

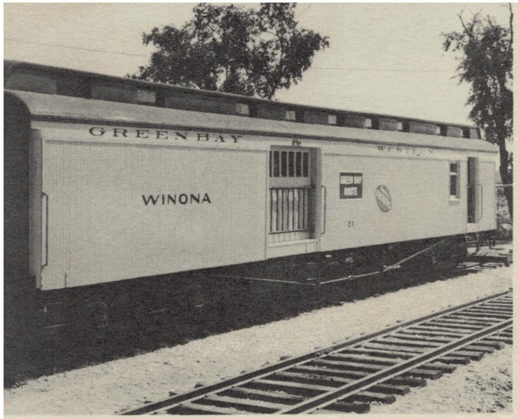


TRACTIVE EFFORT	135,375 lbs.
Weights in working order	
Drivers	540,000 lbs.
Front truck	97,000 lbs.
Trailer	125,000 lbs.
TENDER	435,800 lbs.
WHEEL BASES (FT. AND INS.)	
Driving total	47-3
Each engine	18-3
Engine total	72-5½
Engine and tender total	117-7
Drivers	68 ins.
Cylinders (4)	23¾ x 32
Valves, piston	12 ins.
Maximum travel	7 ins.
Walschaerts valve gear	
BOILER	
Steam pressure	300 lbs.
Diameter first ring	95 ins.
Firebox length	235 ins.
Firebox width	96 ins.
Combustion chamber Length	112 ins.
Security circulators Numbers	7
Tubes, number and diameter, ins.	75 - 2¼
Flues, number and diameter, ins.	184 - 4
Length over flue sheets, ft.	22
Fuel — Soft Coal	
Grate area sq. ft.	150

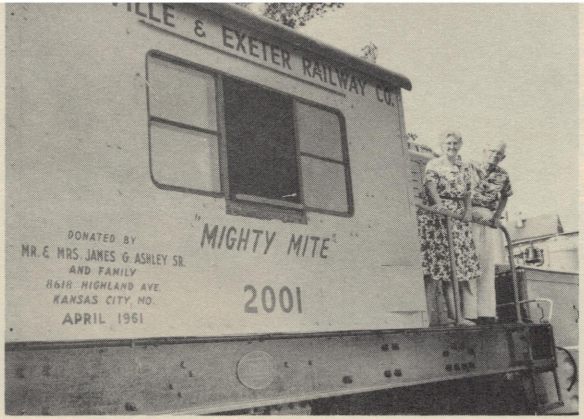


UNION PACIFIC 4-8-8-4, Articulated Mallet

The last of the 25 articulated mallet type locomotives built in 1941. Called the "Big Boy", it has been described as the most beautiful and useful locomotive ever built. It is also the biggest. It was designed for use in the high mountains and was articulated to allow the huge engine to negotiate the turns as it hauled a 6,000 ton train at 70 miles per hour. The engine develops 7,000 horsepower and can operate at speeds up to 80 miles per hour with maximum output delivered at 70 miles per hour. The two engine beds are so connected that they are completely rigid in a vertical plane, all adjustments to curvature in this plane are through the spring suspension.


GREENBAY & WESTERN
WINONA
GREEN BAY ROUTE
21

THE “WINONA”

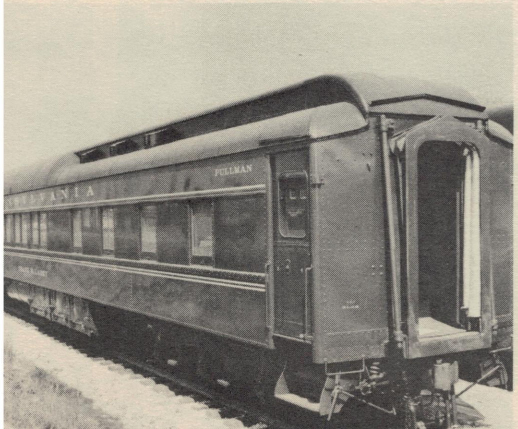

ILLE & EXETER RAILWAY CO.
"MIGHTY MITE"
2001
DONATED BY
MR. & MRS. JAMES G. ASHLEY SR.
AND FAMILY
8618 HIGHLAND AVE.
KANSAS CITY, MO.
APRIL 1961

THE “MIGHTY MITE”

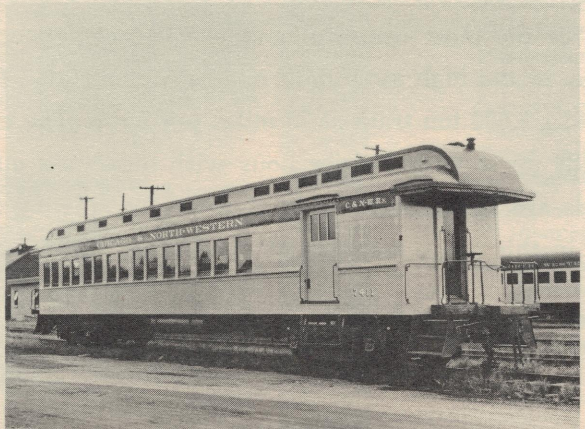
THE AHNAPEE AND WESTER
62
VERN M.

THE “VERN M.

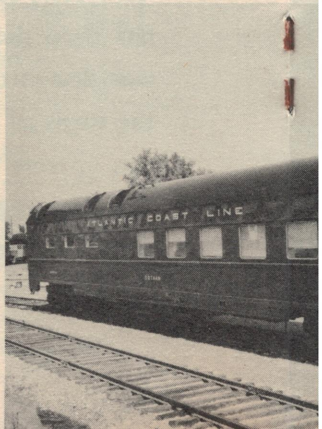
THE LADKY PULLMAN

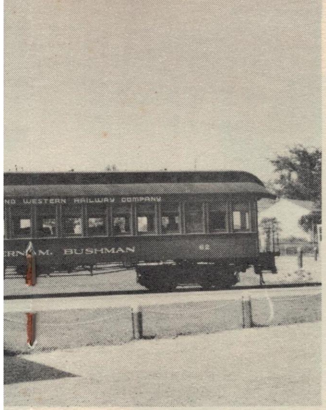


THE “CLYDE J. FITZPATRICK”

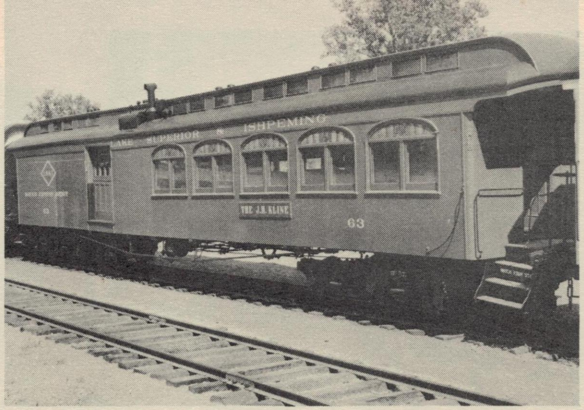

CHICAGO & NORTH-WESTERN
C.&N.W.Ry.

THE “DO

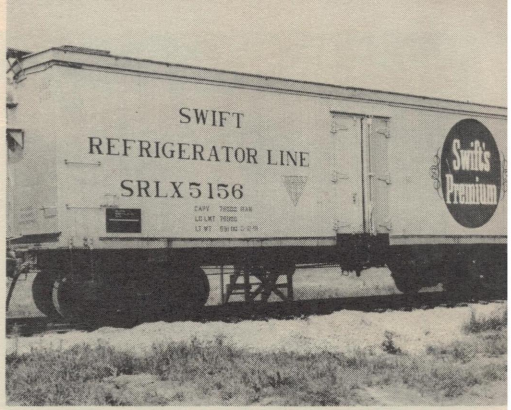



ND WESTERN RAILWAY COMPANY
ERMAN M. BUSHMAN
62

N M. BUSHMAN”

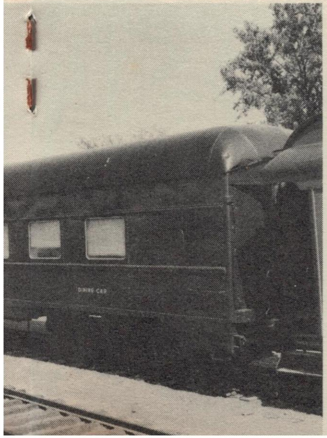

LAKE SUPERIOR & ISHPEMING
THE J.H. KLINE
63

THE “J. H. KLINE”

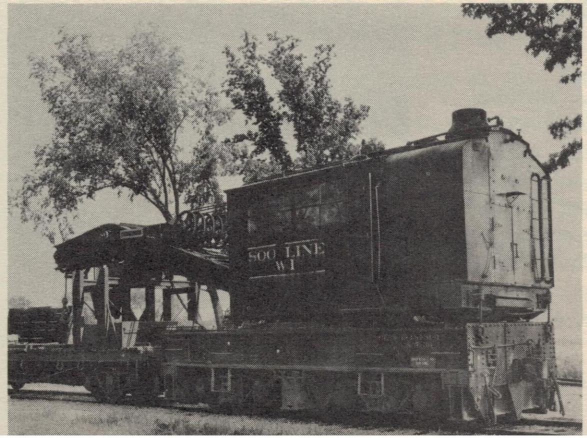

SWIFT
REFRIGERATOR LINE
SRLX 5156
Swift's Premium

SWIFT REFRIGERATOR CAR

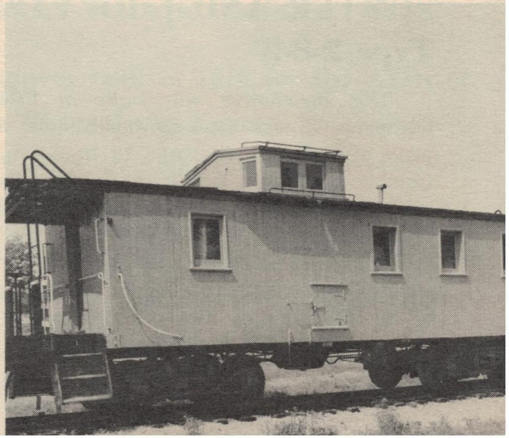
“DOTHAN”



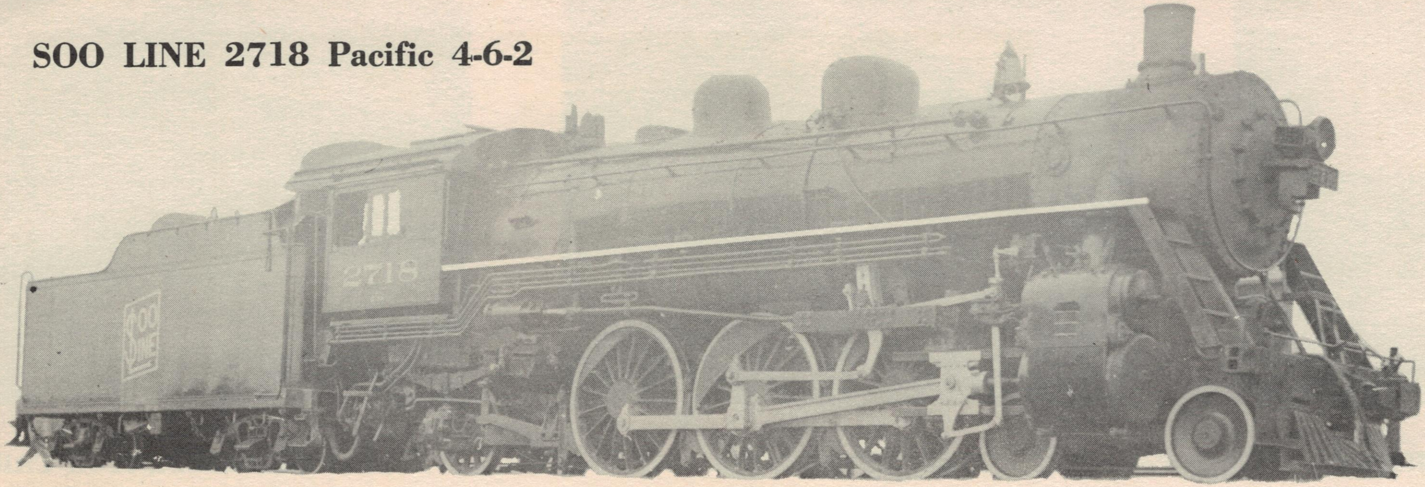
THE “BIG HOOK”



THE CABOOSE



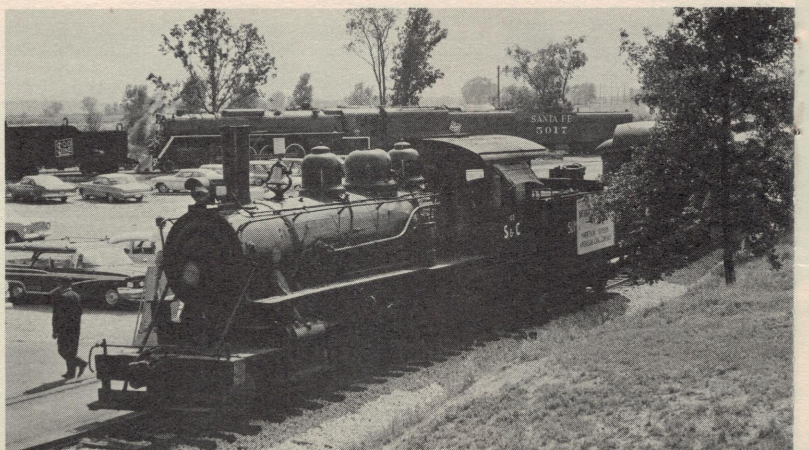
SOO LINE 2718 Pacific 4-6-2



This engine was built in 1924 by Alco (Schenectedy). The engine traveled between Chicago, St. Paul and Duluth for many years at speeds up to 80 miles per hour. Of the H23 class this engine operated through Fond du Lac, Neenah and Stevens Point for many years.

Cylinders 25 x 26 75 inch drivers Tractive effort, 36,833 lbs.
Engine weight 271,000 (new) Boiler pressure 200 lbs.
Type B stoker applied Present tender from a 4-8-2 engine
Power revers applied Walschaerts valve gear

SUMTER AND CHOCTAW MIKADO Type 2-8-2



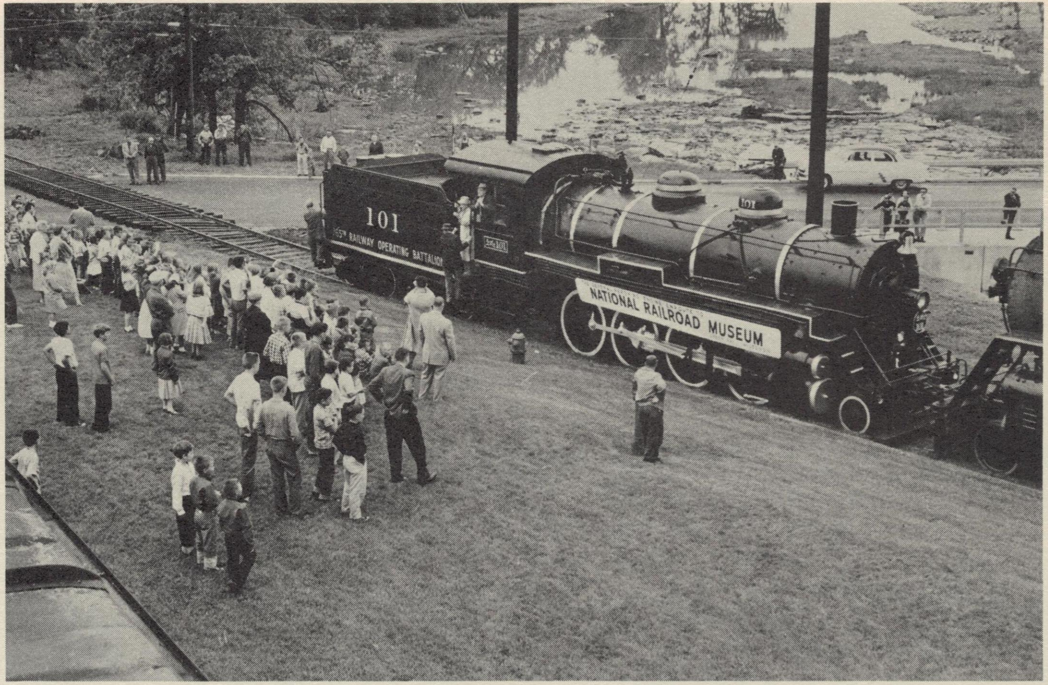
This locomotive was built in 1924 by the Baldwin Company. It was used by the Sumter and Choctaw Company of Bellamy, Alabama to haul lumber of the Allison Lumber Company, a unit of the Marathon Company. Until 1952 the engine also was used as a passenger engine. Number/ 102 was named the "Choctaw" and presented to the museum by the Marathon Corporation. The engine weighs 65 tons and has a boiler pressure of 150 tons. Shipped to the Museum by flat car the engine traveled over the routes of four railroads to arrive here.

Cylinder 21 x 28
Driver diameter 56 inches

Tractive effort ---------- 35,400 lbs.

Factor of adhesion 4.24

BOILER
Outside diameter ---------72 inches
Tubes -----------------13 ft. 9 ins.
Firebox ---------------123 x 38 ins.
Grate area --------------32.7 sq. ft.
Evaporating heating
surface ----------------1862 ins.
Superheat surface --------420 sq. ft.
Driving wheelbase ------15 ft. 6 in.
Engine wheelbase ------23 ft. 8 ins.
Engine and Tender
wheelbase ---------57 ft. 5 ins.
Weight on drivers ------150,000 lbs.
Total ------------------166,400 lbs.
Tender capacity ------5,400 gallons
Walschaerts valve gear

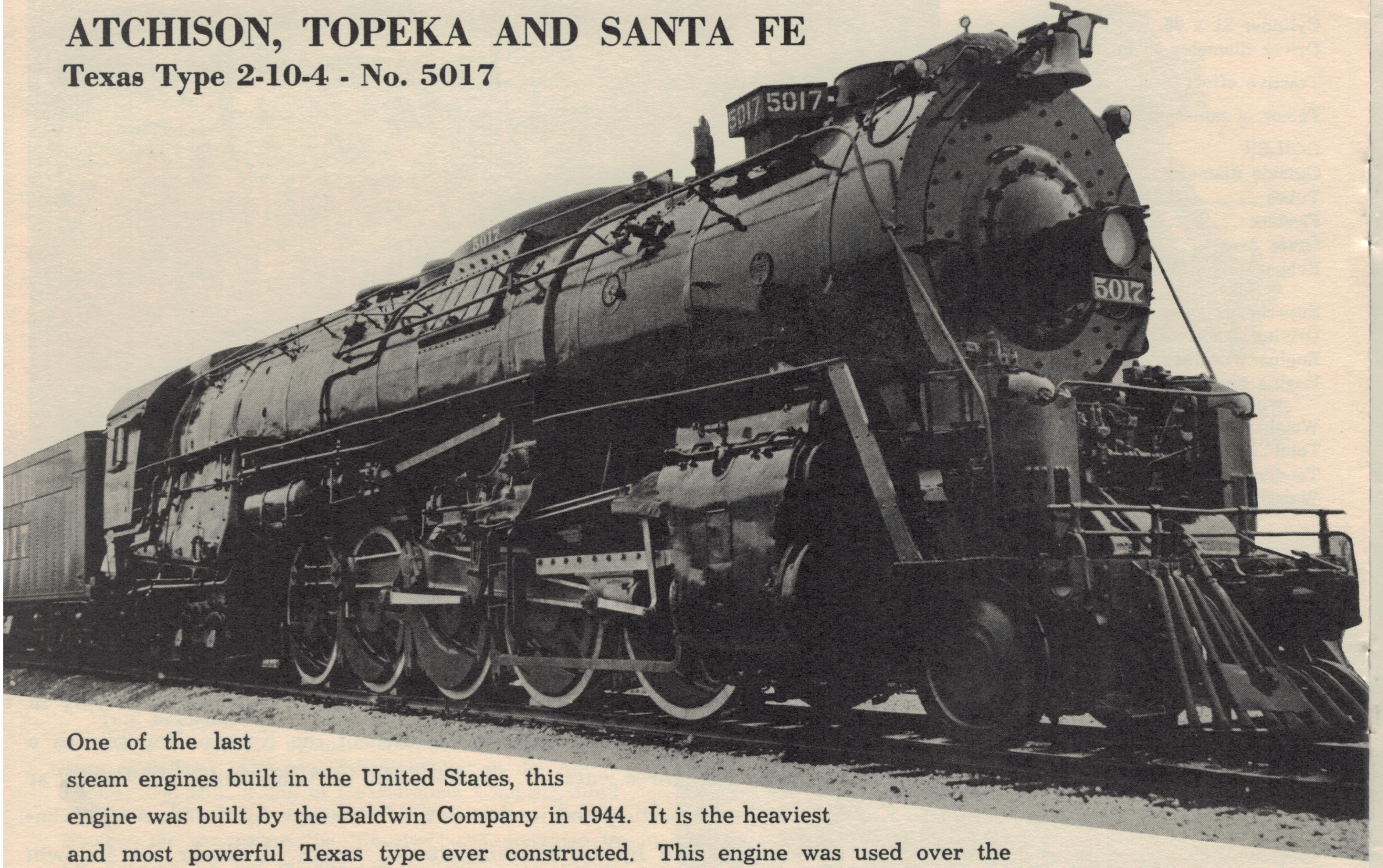


UNITED STATES ARMY CONSOLIDATION Type 2-8-0

The General Pershing Number 101. The sole survivor of the 150 locomotives built in 1916 for the Army in World War I. The museum received the locomotive from President Sygman Rhee of the Korean Republic as a gift from the Korean people. This engine saw action in three wars. . . . France, 1918; in Army camps in World War II, and in Korea. The engine went to Korea in 1951 and participated in that nation's struggle for freedom. The engine was recovered from damaged areas and reconstructed by Army transportation troops. Built by the Baldwin Company, the engine holds a certificate of service from the U. S. Army presented by the Secretary of the Army, May 30, 1959.

ATCHISON, TOPEKA AND SANTA FE

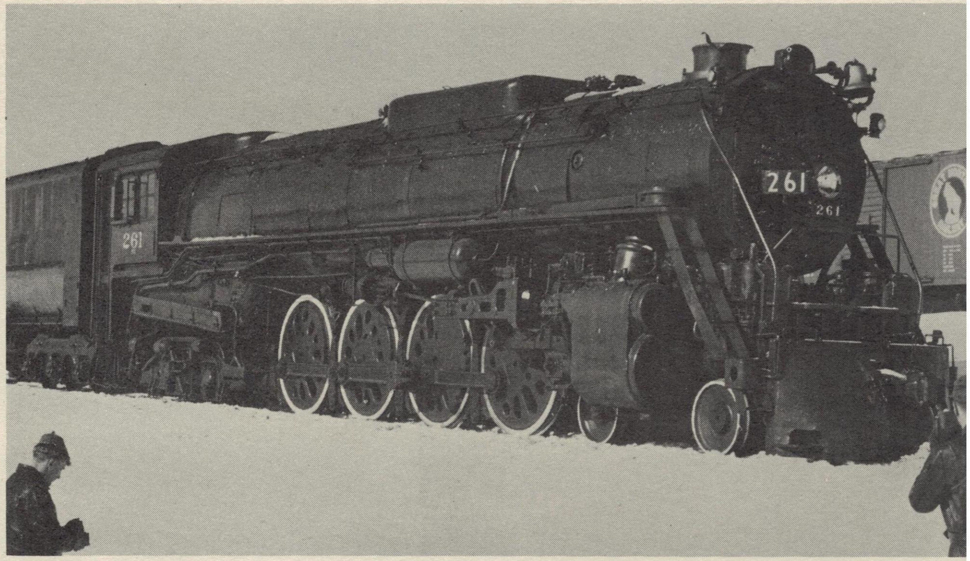
Texas Type 2-10-4 - No. 5017



One of the last steam engines built in the United States, this engine was built by the Baldwin Company in 1944. It is the heaviest and most powerful Texas type ever constructed. This engine was used over the Mountain Division of New Mexico. These engines have the largest piston thrust of any locomotive at 239,000 lbs.

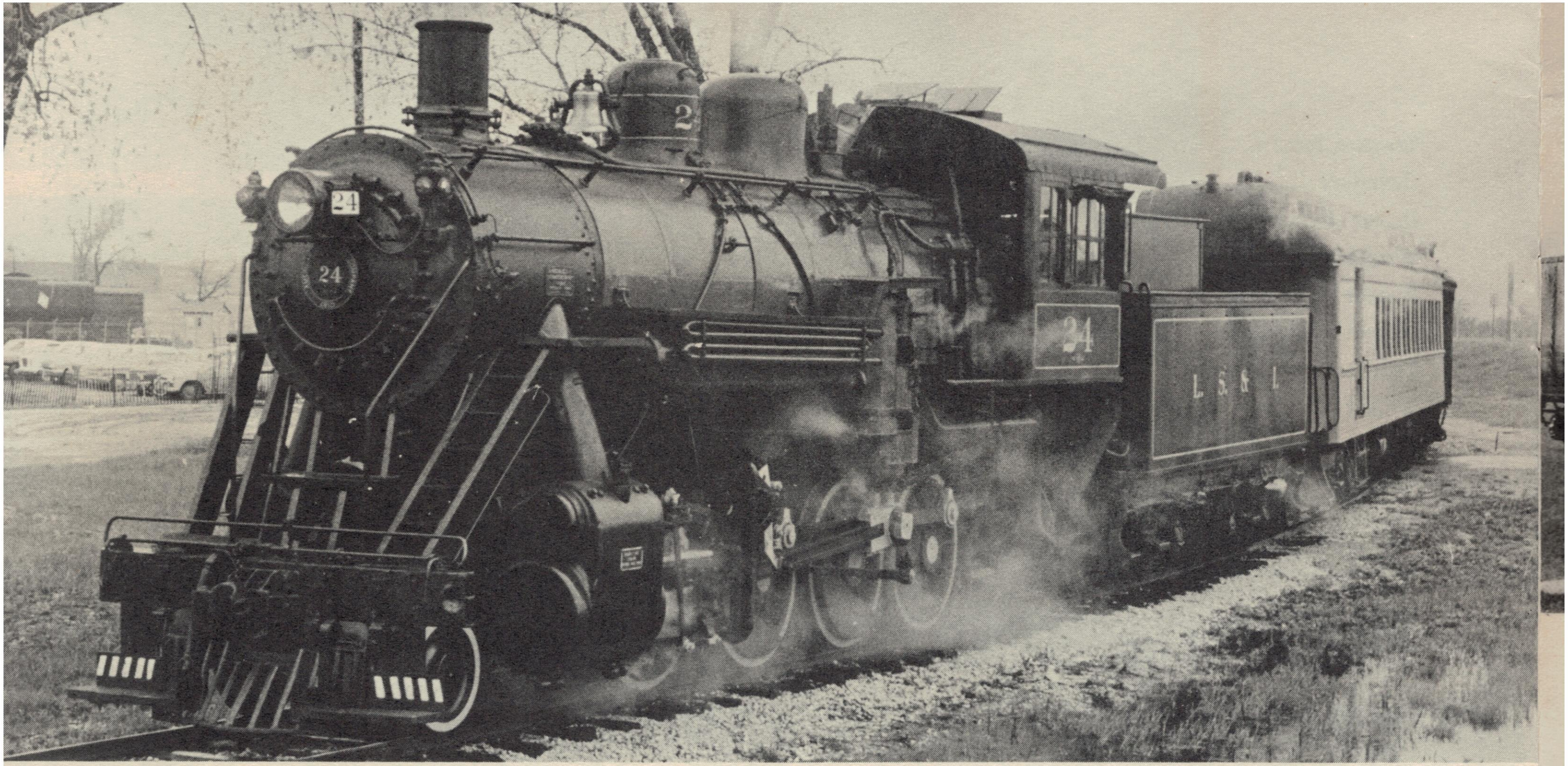
Milwaukee Road Northern No. 261 Type 4-8-4

Tractive force ----------- 93,000 lbs.
Cylinders ------------------ 30 x 34
Driver diameter ------------ 74 ins.
Weight on drivers ------ 380,000 lbs.
Weight on front truck -- 50,000 lbs.
Weight on back truck -- 108,000 lbs.
Total of engine --------- 538,000 lbs.
Weight on tender ------ 369,000 lbs.
Driving wheel base ----- 26 ft. 2 ins.
Tender 24,500 gallons of water
7,000 gallons of oil
Tandem main rod.
Walschaerts valve gear
Valves set with ⅛ inch exhaust
LAP for heavy setting on grades
Maximum cut of 72½ on starting
Total engine wheel base 50 ft. 2 ins.
Boiler diameter ------------- 94 ins.
Fuel — oil
Firebox -------------- 162 x 108 ins.
Grate area ------------- 121.5 sq. ft.
Steam pressure ------------- 310 lbs.
Evaporating heating surface
Direct ------------------ 632 sq. ft.
Indirect --------------- 5433 sq. ft.
Superheating ---------- 3675 sq. ft.



Number 261-S-3 is the first locomotive received by the National Railroad Museum. The engine was built by Baldwin in 1943 and was the last steam engine purchased by the Milwaukee Road. Used in fast freight service between Chicago, Milwaukee and St. Paul hauling as many as 130 cars at speeds of 60 miles per hour.

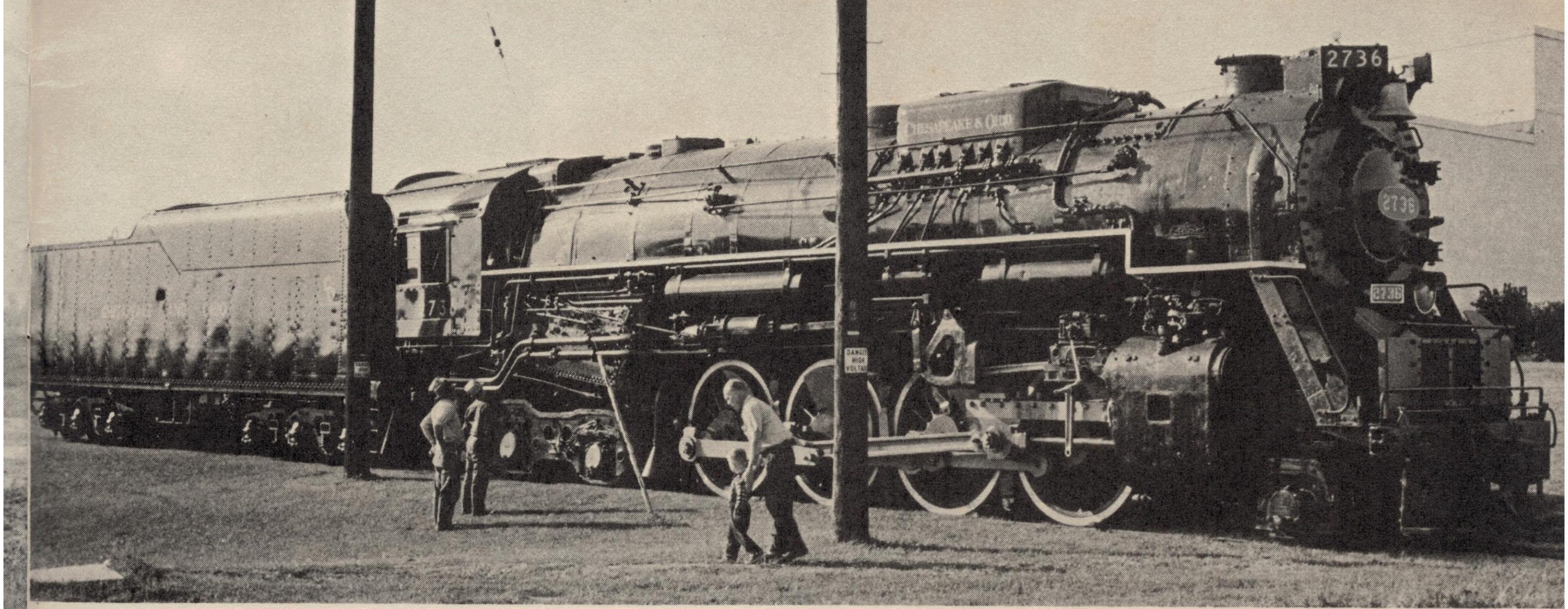
Engine weight 348 tons
Boiler pressure 285 tons
Tractive force 70,000 tons



LAKE SUPERIOR AND ISHPEMING Consolidation Type 2-8-0

Built in 1910 in Pittsburgh. Formerly served on the Marquette and Southeastern Railway. This engine was in continuous service for 52 years and was rebuilt in 1931 at the Presque Isle shops of the LS&I. The engine was used on ore trains, running from Marquette, Ishpeming and Little Lake as well as passenger trains.

Originally a narrow firebox engine with slide valves, 20 x 28 inch cylinders and saturated. Rebuilt with wide firebox with two thermic syphons, superheated, new piston valve cylinder saddles with 22 x 28 inch cylinders and Worthington Feed Water Heater. Tractive effort is now 42,000 lbs. with 168,000 lbs. on drivers and 189,360 lbs. total engine weight. The driving wheels are 57 inches. This engine could handle 4406 tons on a level track, 88 fifty ton cars.

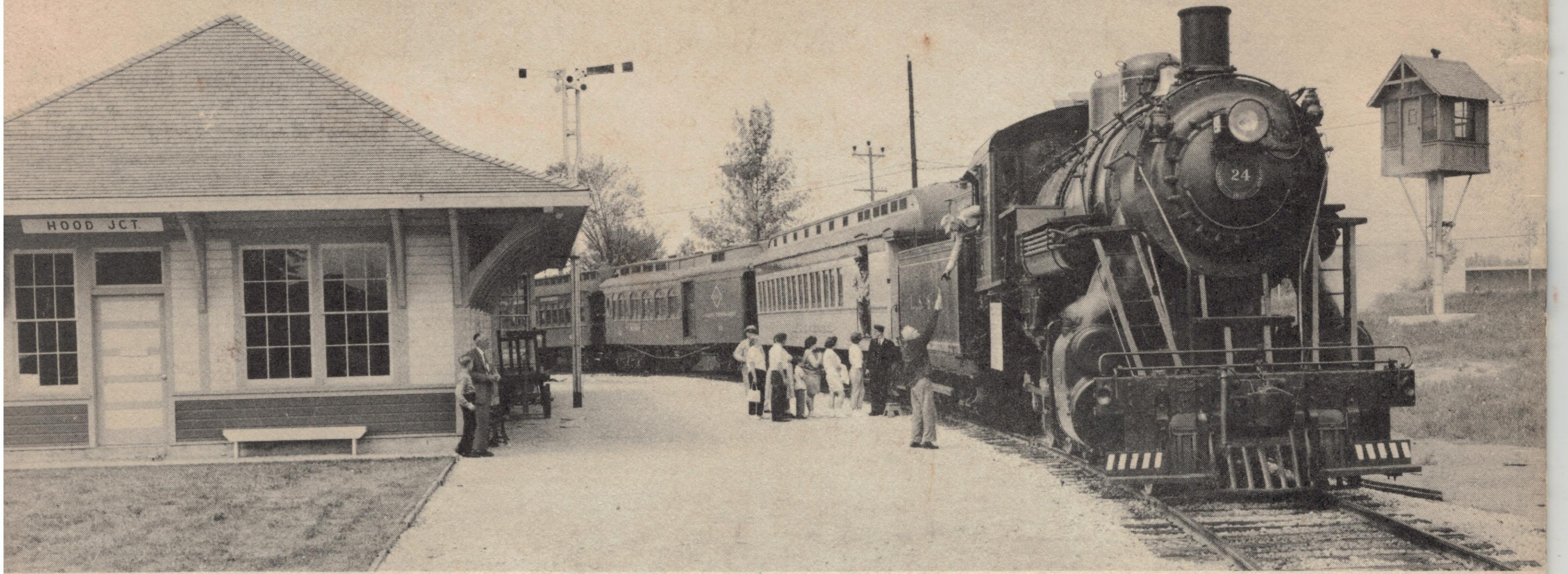


CHESAPEAKE AND OHIO Berkshire Type 2-8-4

This engine was built by the American Locomotive Company in 1936. Operated over the large C&O system until presented by the company to the Railroad Museum.

Tractive force, engine	69,350 lbs.
Booster	14,400 lbs.
Starting	83,750 lbs.
Cylinders	26 x 34 ins.
Drivers	69 ins.
Weight on drivers	292,000 lbs.
Front truck	44,500 lbs.
Trailing truck	123,000 lbs.
Total	459,000 lbs.
Weight on tender ⅔ loaded	312,000 lbs.
Driving wheel base	18 ft. 3 ins.
Precision reverse gear	
Outside bearings, front truck	

129 inches width	15 ft. 8 ins.
Total engine wheelbase	42 ft.
Fuel, soft coal	
Firebox, length and width	136 x 96 ins.
Grate area	90.3 sq. ft.
Diameter of boiler	86 ins.
Steam pressure	245 lbs.
Evap. heating surface	
Direct	466 ft.
Indirect	4308
Total	4774
Superheat (Type E)	1932
Tender capacity 21,000 gallon 30 tons	



The HOOD JUNCTION DEPOT - - -

The Hood Junction depot is an exact replica of the old-time Southern Railway station at Langley, S. C. The depot was donated to the Museum by The Member Lines of the American Short Line Railroad Association. The museum offices and railroad exhibits are housed within the depot. Many of the exhibits are from the collection of General Carl Gray, Army Transportation expert who advocated the construction of a railroad museum.